

Appendix V-III

USDA Animal Census of Agriculture Data

Information about the number and types of animal operations in counties located entirely or partially in the Chowan River basin were queried using the 2017 USDA Census of Agriculture. The census and the query are available online: https://quickstats.nass.usda.gov/?source_desc=CENSUS. The census definition of a farm is “any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year” (USDA, 2017). For the purposes of this report, the 2007, 2012, and 2017 census was queried for the sector “animals and products”. To remain consistent with the type of information presented, “inventory” was selected as the category and queried for all three census years. Inventories are measured as of December 31st of the census year (USDA, 2017). In North Carolina, counties included in the query were Bertie, Chowan, Gates, Hertford, and Northampton. Because much of the Chowan River basin is located in Virginia, animal numbers were also queried for counties located entirely or partially in the Chowan River basin in Virginia. In some cases, the census allows for queries on the watershed scale. Animal numbers for the South Atlantic Gulf – Albemarle HUC 030201 are also included to provide an overall view of the types and number of animals located throughout the entire river basin. These numbers are included as a way to help identify potential sources of nutrients in the basin. More in-depth analysis is needed to understand how the number of animals and operations, fertilizer, and crop types as well as soil can potentially impact the amount of nutrients in the basin.

NORTH CAROLINA

Poultry (Chicken), Total – Inventory

The numbers associated with poultry are the total number of animals (broilers) and total number of operations with inventory reported at a point in time (end of December) for each census year in each county. None of the poultry operations fall under the definition of a “animal operation” as defined under North Carolina’s [General Statute 143-215.10B](#). More information about North Carolina’s Animal Feeding Operations (AFO) Program can be found in Chapter 7.

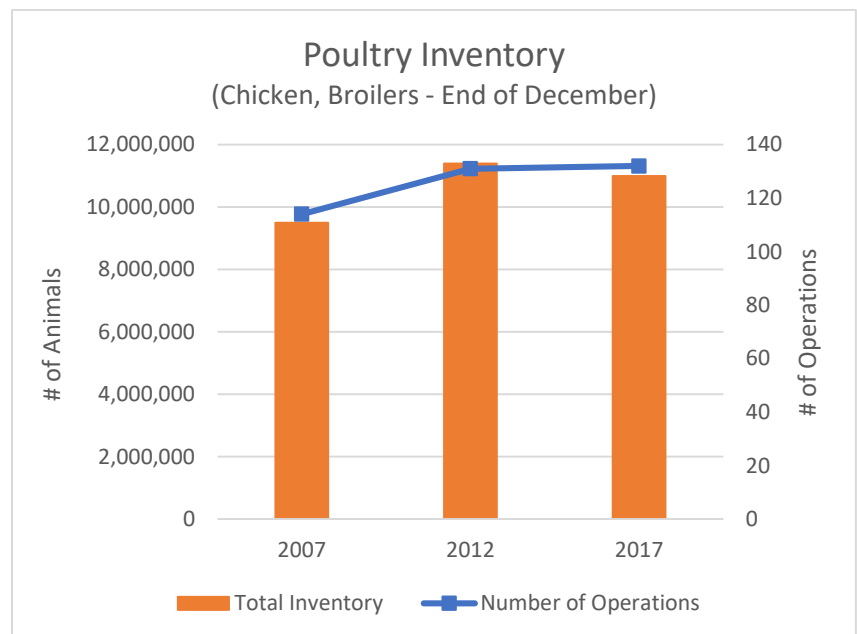
Total Poultry Inventory (CHICKEN, BROILERS)

County	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	% Change 2007-2017	County % of Total (2017)
BERTIE	5,251,485	6,083,898	5,863,743	15.9	-3.6	11.7	53.3
CHOWAN	259,495	250,475	(D)	-3.5			
GATES	826,791	1,125,530	1,474,245	36.1	31.0	78.3	13.4
HERTFORD	1,623,690	2,116,632	2,140,814	30.4	1.1	31.8	19.5
NORTHAMPTON	1,535,427	1,819,554	1,514,480	18.5	-16.8	-1.4	13.8
TOTALS	9,496,888	11,396,089	10,993,282	20.0	-3.5	15.8	

(D) Information withheld to avoid disclosing data for individual farms.

Number of Operations with Poultry Inventory

County	2007	2012	2017
BERTIE	51	63	67
CHOWAN	8	6	2
GATES	12	17	20
HERTFORD	21	31	25
NORTHAMPTON	22	14	18
TOTALS	114	131	132



Hogs, Total – Inventory

Swine/hog numbers are generally low in the five counties located entirely or partially in the basin. The numbers associated with swine/hogs are the total number of animals and total number of operations with inventory reported at a point in time (end of December) for each census year in each county. There are no new or expanding permitted swine operations in the Chowan River basin. Instead, the increase in number of operations and total number of animals are associated with farms that are below the 250 permitting threshold defined under North Carolina's [General Statute 143-215.10B](#). Therefore, these operations are not required to obtain a permit. More information about North Carolina's Animal Feeding Operations (AFO) Program can be found in Chapter 7.

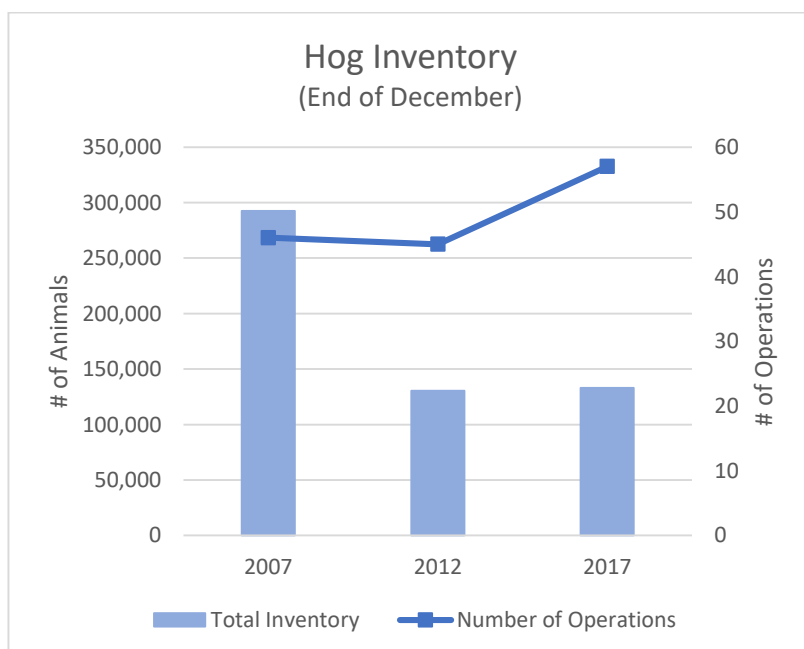
Total Hogs Inventory

County	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	% Change 2007-2017	County % of Total (2017)
BERTIE	47,307	(D)	(D)				
CHOWAN	(D)	6,220	(D)				
GATES	27,775	22,637	24,195	-18.5	6.9	-12.9	18.2
HERTFORD	63,721	(D)	(D)				
NORTHAMPTON	153,834	101,623	108,889	-33.9	7.1	-29.2	81.8
TOTALS	292,637	130,480	133,084	-55.4	2.0	-54.5	

(D) Information withheld to avoid disclosing data for individual farms.

Number of Operations with Hog Inventory

County	2007	2012	2017
BERTIE	7	10	22
CHOWAN	3	7	4
GATES	10	11	14
HERTFORD	9	6	10
NORTHAMPTON	17	11	7
TOTALS	46	45	57



Cattle, Total (Including Calves) – Inventory

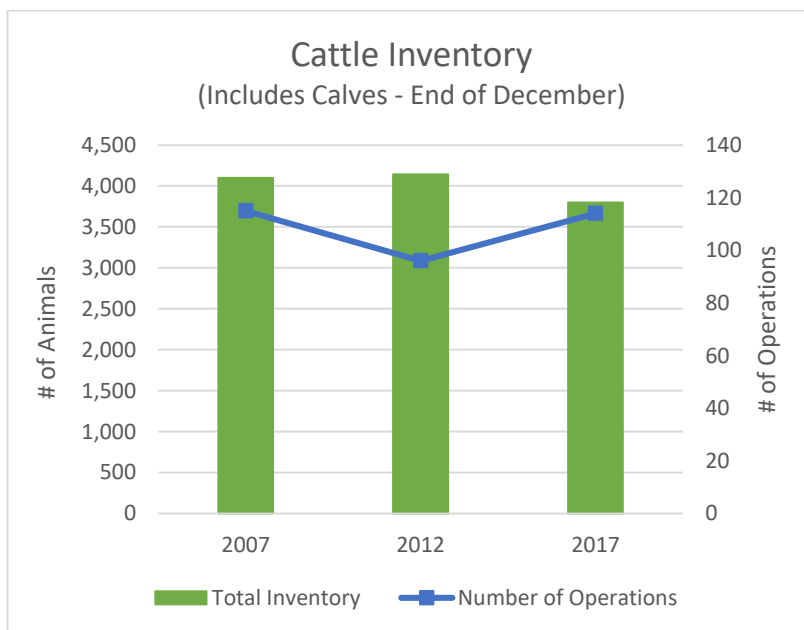
The numbers associated with cattle are the total number of animals and total number of operations with inventory reported at a point in time (end of December) for each census year in each county. There are no new or expanding cattle operations in the Chowan River basin. Instead, the increase in number of operations are associated with farms that fall below the 100 confined cattle threshold defined under North Carolina's [General Statute 143-215.10B](#). Therefore, these operations are not required to obtain a permit. More information about North Carolina's Animal Feeding Operations (AFO) Program can be found in Chapter 7.

Total Cattle (Including Calves) Inventory

County	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	% Change 2007-2017	County % of Total (2017)
BERTIE	607	824	725	35.7	-12.0	19.4	19.1
CHOWAN	1,196	1,293	847	8.1	-34.5	-29.2	22.3
GATES	617	792	407	28.4	-48.6	-34.0	10.7
HERTFORD	310	272	261	-12.3	-4.0	-15.8	6.9
NORTHAMPTON	1,370	961	1,558	-29.9	62.1	13.7	41.0
TOTALS	4,100	4,142	3,798	1.0	-8.3	-7.4	

Number of Operations with Cattle Inventory

County	2007	2012	2017
BERTIE	22	18	23
CHOWAN	31	19	18
GATES	19	20	15
HERTFORD	9	15	7
NORTHAMPTON	34	24	51
TOTALS	115	96	114



VIRGINIA

Poultry (Chicken), Total – Inventory

The numbers associated with poultry are the total number of animals (broilers) and total number of operations with inventory reported at a point in time (end of December) for each census year in each county.

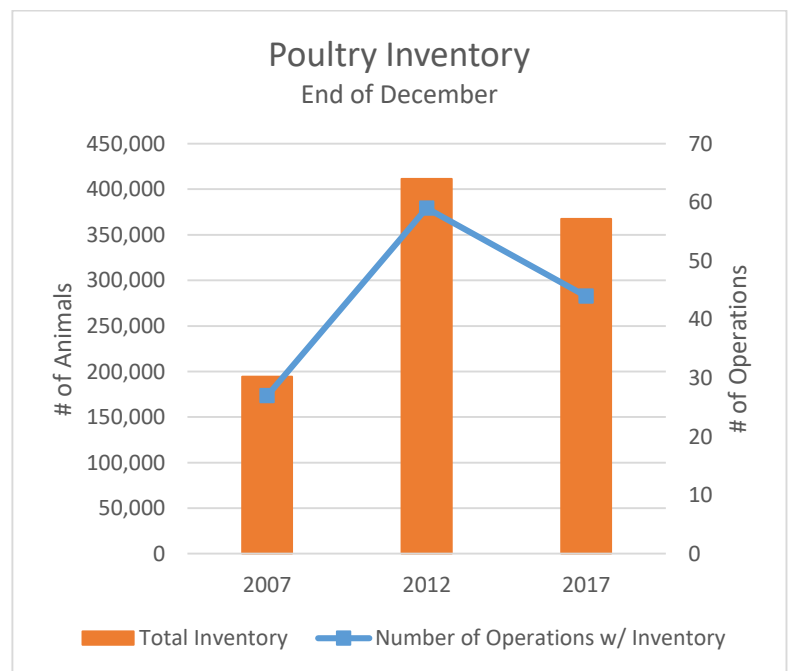
Total Poultry Inventory (CHICKEN, BROILERS)

County	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	% Change 2007-2017
BRUNSWICK		120	(D)			
DINWIDDIE	(D)	(D)	(D)			
FRANKLIN	263	2,244	430	753.2	-80.8	63.5
GREENSVILLE			(D)			
ISLE OF WIGHT	(D)	(D)	(D)			
LUNENBURG		370			-100.0	
PRINCE GEORGE		(D)	2,745			
SOUTHAMPTON	193,800	203,500	(D)	5.0		
SUFFOLK CITY	136	204,894	364,350	150,557.4	77.8	267,804.4
SURRY		(D)	(D)			
SUSSEX		103	(D)			
TOTAL	194,199	411,231	367,525	111.8	-10.6	89.3

(D) Information withheld to avoid disclosing data for individual farms.

Number of Operations with Poultry Inventory

County	2007	2012	2017
BRUNSWICK		9	3
DINWIDDIE	1	4	2
FRANKLIN	7	17	8
GREENSVILLE			2
ISLE OF WIGHT	1	3	6
LUNENBURG		5	
PRINCE GEORGE		2	6
SOUTHAMPTON	3	5	5
SUFFOLK CITY	11	9	8
SURRY	4	2	2
SUSSEX		3	2
TOTAL	27	59	44



Hogs, Total – Inventory

Swine/hog numbers are generally lower in the counties located entirely or partially in the basin in Virginia when compared to North Carolina. The numbers associated with swine/hogs are the total number of animals and total number of operations with inventory reported at a point in time (end of December) for each census year in each county.

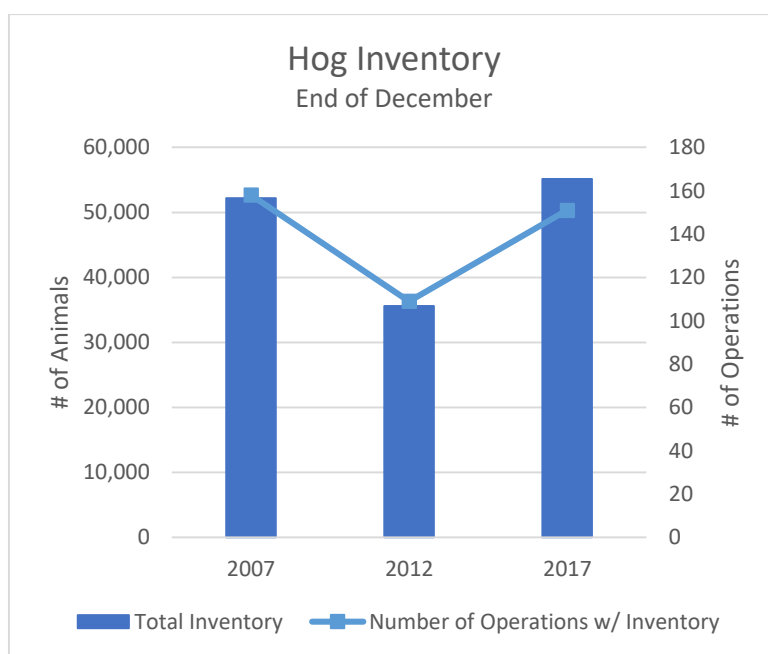
Total Hogs Inventory

County	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	% Change 2007-2017
BRUNSWICK	(D)	(D)	(D)			
DINWIDDIE	2,256	2,130	458	-5.6	-78.5	-79.7
FRANKLIN	965	298	272	-69.1	-8.7	-71.8
GREENSVILLE			(D)			
ISLE OF WIGHT	(D)	(D)	28,412			
LUNENBURG	(D)	(D)	(D)			
PRINCE GEORGE	288	306	314	6.3	2.6	9.0
SOUTHAMPTON	40,019	31,687	24,375	-20.8	-23.1	-39.1
SUFFOLK CITY	8,660	1,165	1,321	-86.5	13.4	-84.7
SURRY	(D)	(D)	(D)			
SUSSEX	(D)	(D)	(D)			
TOTAL	52,188	35,586	55,152	-31.8	55.0	5.7

(D) Information withheld to avoid disclosing data for individual farms.

Number of Operations with Hog Inventory

County	2007	2012	2017
BRUNSWICK	11	7	11
DINWIDDIE	23	16	31
FRANKLIN	39	26	39
GREENSVILLE			1
ISLE OF WIGHT	5	11	8
LUNENBURG	11	3	13
PRINCE GEORGE	3	3	8
SOUTHAMPTON	9	12	8
SUFFOLK CITY	35	18	19
SURRY	20	10	8
SUSSEX	2	3	5
TOTAL	158	109	151



Cattle, Total (Including Calves) – Inventory

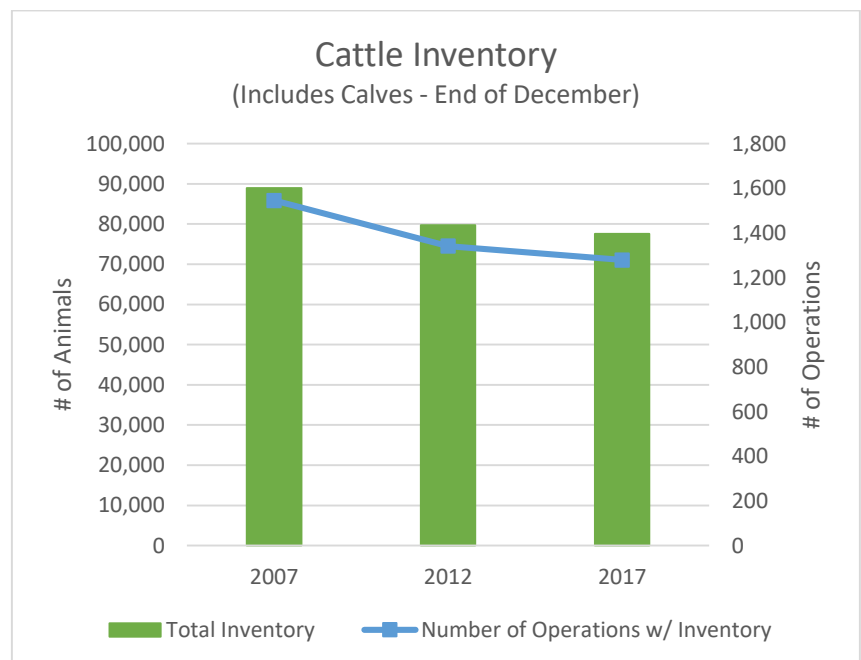
The numbers associated with cattle are the total number of animals and total number of operations with inventory reported at a point in time (end of December) for each census year in each county.

Total Cattle (Including Calves) Inventory

County	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	% Change 2007-2017
BRUNSWICK	8,828	5,460	5,494	-38.2	0.6	-37.8
DINWIDDIE	6,050	6,630	5,548	9.6	-16.3	-8.3
FRANKLIN	47,863	45,136	46,975	-5.7	4.1	-1.9
GREENSVILLE	994	846	1,050	-14.9	24.1	5.6
ISLE OF WIGHT	2,975	3,181	3,967	6.9	24.7	33.3
LUNENBURG	12,734	10,495	7,984	-17.6	-23.9	-37.3
PRINCE GEORGE	1,410	1,225	1,059	-13.1	-13.6	-24.9
SOUTHAMPTON	3,829	4,033	2,337	5.3	-42.1	-39.0
SUFFOLK CITY	1,230	897	527	-27.1	-41.2	-57.2
SURRY	1,544	764	1,618	-50.5	111.8	4.8
SUSSEX	1,439	1,065	969	-26.0	-9.0	-32.7
TOTAL	88,896	79,732	77,528	-10.3	-2.8	-12.8

Number of Operations with Cattle Inventory

County	2007	2012	2017
BRUNSWICK	153	109	99
DINWIDDIE	147	135	128
FRANKLIN	741	660	644
GREENSVILLE	34	27	35
ISLE OF WIGHT	43	38	57
LUNENBURG	189	191	152
PRINCE GEORGE	48	39	31
SOUTHAMPTON	87	58	46
SUFFOLK CITY	50	38	31
SURRY	21	21	34
SUSSEX	32	25	22
TOTAL	1,545	1,341	1,279



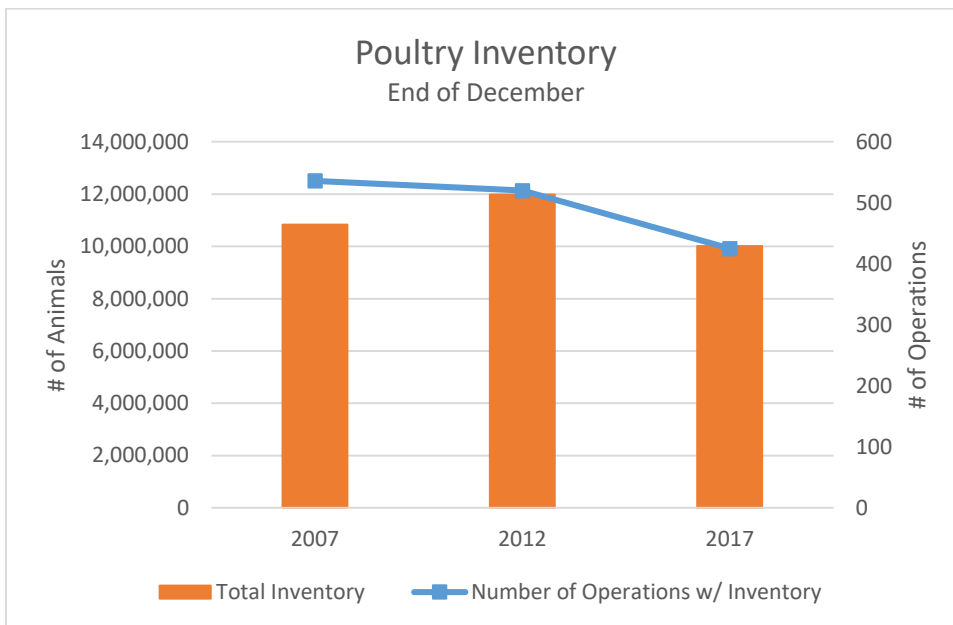
SOUTH ATLANTIC GULF-ALBEMARLE (HUC 030201)

The South Atlantic Gulf – Albemarle (HUC 030102) basin was queried to evaluate the number of operations and animals compared to the counties located in the basin in both North Carolina and Virginia. The South Atlantic Gulf - Albemarle includes the entire Chowan River basin and all or portions of the counties queried in North Carolina and Virginia.

Poultry (Chicken, Broilers), Total – Inventory

The numbers associated with poultry are the total number of animals (broilers) and total number of operations with inventory reported at a point in time (end of December) for each census year in the South Atlantic Gulf-Albemarle watershed.

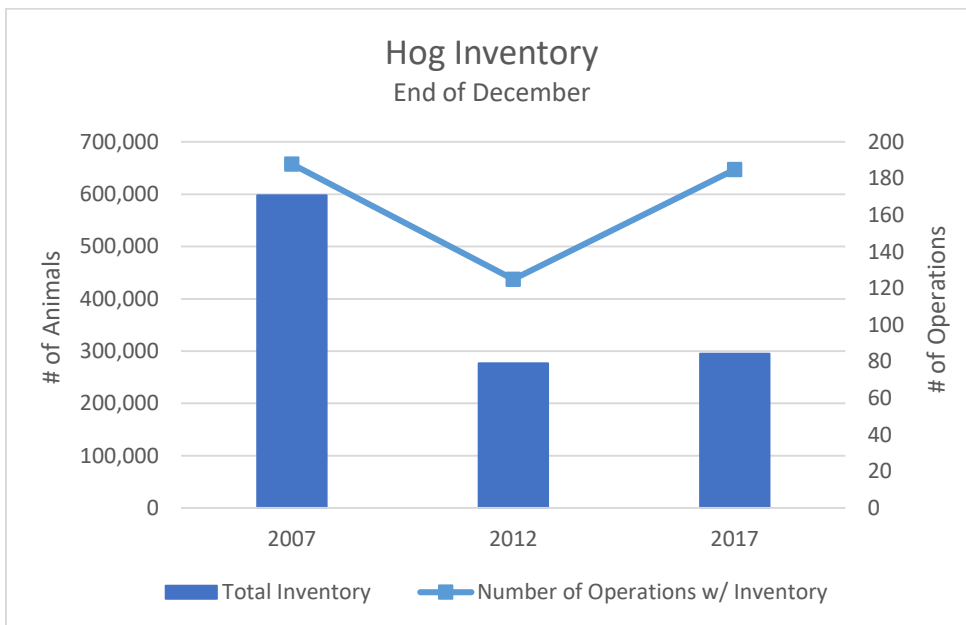
	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	%Change 2007-2017
Number of Operations	536	520	425	-3.0	-18.3	-20.7
Number of Animals	10,838,379	11,986,236	10,013,518	10.6	-16.5	-7.6



Hogs, Total – Inventory

The numbers associated with swine/hogs are the total number of animals and total number of operations with inventory reported at a point in time (end of December) for each census year in the South Atlantic Gulf-Albemarle watershed.

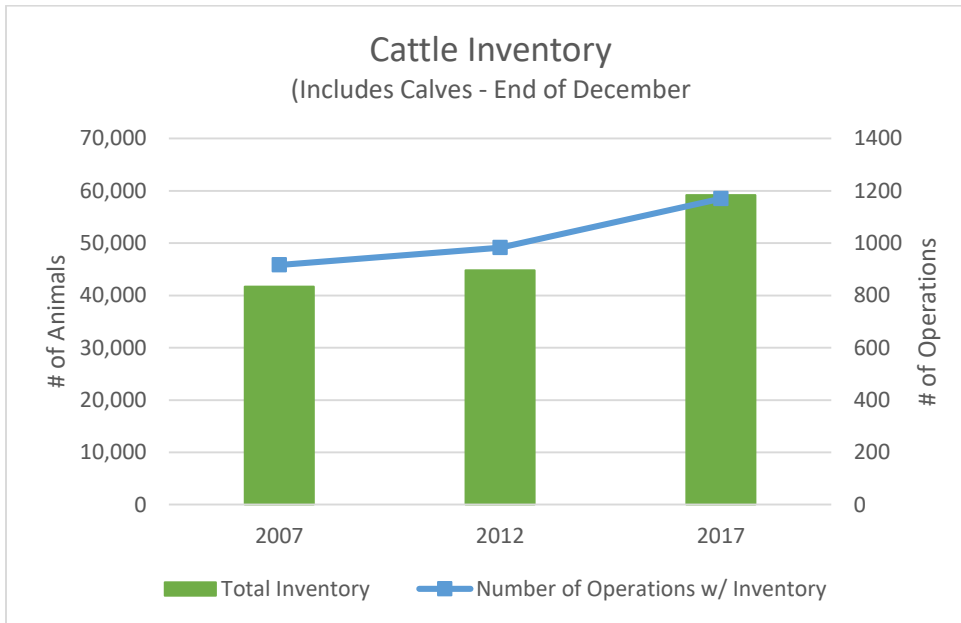
	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	%Change 2007- 2017
Number of Operations	188	125	185	-33.5	48.0	-1.6
Number of Animals	597,968	276,735	295,059	-53.7	6.6	-50.7



Cattle, Total (Including Calves) – Inventory

The numbers associated with cattle are the total number of animals and total number of operations with inventory reported at a point in time (end of December) for each census year in the South Atlantic Gulf-Albemarle watershed.

	2007	2012	2017	% Change 2007-2012	% Change 2012-2017	%Change 2007-2017
Number of Operations	917	983	1,170	7.2	19.0	27.6
Number of Animals	41,708	44,791	59,217	7.4	32.2	42.0



COMPARING TOTAL COUNTY NUMBERS TO BASIN (HUC 030102) NUMBERS

Five counties in North Carolina are entirely or partially located in the Chowan River basin. Eleven counties in Virginia are entirely or partially located in the basin. Animal numbers were withheld from some of the counties in both states to avoid disclosing information about individual farms. Because some counties are partially located in the basin, the number of operations and number of animals (inventory) reported by county cannot be compared to the basin numbers. These numbers can, however, be used as a way to help identify potential sources of nutrients in the basin and determine which areas of the basin may have a higher density of animal agriculture. More in-depth analysis is needed to understand how the number of animals and operations, fertilizer, and crop types, as well as soil, can potentially impact the amount of nutrients in the basin.

Number of Operations & Animals (Inventory): County Level	2007	2012	2017
Poultry Operations NC	114	131	132
Poultry Operations VA	27	59	44
Poultry Inventory NC	9,496,888	11,396,089	10,993,282
Poultry Inventory VA	194,199	411,231	367,525
Hog Operations NC	46	45	57
Hog Operations VA	158	109	151
Hog Inventory NC	292,637	130,480	133,084
Hog Inventory VA	52,188	35,586	55,152
Cattle Operations NC	115	96	114
Cattle Operations VA	1,545	1,341	1,279
Cattle Inventory NC	4,100	4,142	3,798
Cattle Inventory VA	88,896	79,732	77,528
Number of Operations & Animals (Inventory): Basin (HUC 030102)	2007	2012	2017
Poultry Operations HUC 030102	536	520	425
Poultry Inventory HUC 030102	10,838,379	11,986,236	10,013,518
Hog Operations HUC 030102	188	125	185
Hog Inventory HUC 030102	597,968	276,735	295,059
Cattle Operations HUC 030102	917	983	1,170
Cattle Inventory HUC 030102	41,708	44,791	59,217

